

Amendments to the Specification:

Please replace paragraph beginning on page 2, line 9 with the following amended paragraph:

FIG. 2 is a schematic diagram of a portion of a threshold detector in accordance with one embodiment of the present invention.

Please replace paragraph beginning on page 6, line 3 with the following amended paragraph:

Referring now to FIG. 2, shown is a schematic diagram of a portion of a threshold detector ~~10~~ 15 in accordance with one embodiment of the present invention. As shown in FIG. 2, differential input signals V_p and V_n are coupled to, respectively, a base of transistors Q1 and Q2. In the embodiment shown in FIG. 2, transistors Q1 and Q2 (and the additional transistors of FIG. 2) are n-p-n Indium Phosphide (InP) heterojunction bipolar transistors (hbt). Such transistors may be minimum sized, and have a beta (β) of approximately 20. Transistors Q1 and Q2 have collectors and emitters coupled together, as shown in FIG. 2. Transistors Q1 and Q2 thus form an input stage for threshold detector ~~10~~ 15.

Please replace paragraph beginning on page 7, line 6 with the following amended paragraph:

A power supply voltage (V_{CC}) is coupled to various transistors through resistors R1 through R4, respectively. Resistors R1 through R4 may have values that vary in different embodiments. Transistor Q7 has a base coupled to the emitter of Q5, a collector coupled to the power supply voltage through R1 and an emitter coupled to the emitter of transistor Q8. Transistor Q8 in turn has a base tied to the emitter of Q6 and a collector coupled to the power supply voltage via R2. Transistor Q9 has a collector coupled to the emitter of Q7 through resistor R5 and a collector coupled through resistor R6 to V_{CC} . More so, transistor Q9 has its base coupled to its collector, which is also coupled to a base of transistor Q11, which is connected in series with transistor Q10 and resistor R7. Capacitors C1, C2 and C3 are also included in the threshold detector ~~10~~ 15 for biasing and noise reduction purposes.